



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

SORRELLS *et al.*

Appl. No.: 09/550,644

Filed: April 14, 2000

For: **Method and System for Down-
Converting an Electromagnetic
Signal, and Transforms for Same,
and Aperture Relationships**

Confirmation No.: 9317

Art Unit: 2687

Examiner: Sam Bhattacharya

Atty. Docket: 1744.0010009

Seventh Supplemental Information Disclosure Statement

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Seventh Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Sixth Supplemental Information Disclosure Statement filed on May 3, 2004 in connection with the above-captioned application.

In addition to providing hard copies of the documents as required by applicable rules (see box 7 below), Applicants herewith provide a Compact Disc labeled "Disc 4" having stored thereon searchable electronic copies (in PDF format) of the documents listed on the PTO-1449. More specifically, the CD contains electronic copies of documents AP59, AC61-AI61, AA62-AI62, AA63-AI63, AA64-AI64, AA65-AI65, and AA66-AD66. In addition, the CD contains electronic copies of documents AH57, AI57, AA58-AI58, AA59-AI59, AA60-AI60, AA61, and AB61, all of which were cited in the

present application in a previous Information Disclosure Statement. The file names on the CD correspond to the identifiers on the PTO-1449 forms. It is noted that the CD is being provided in addition to hard copies of the documents for the convenience of the Examiner.

Applicants have listed publication dates on the attached Form PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Documents AP59 and AD64 were cited in an Office Action in related U.S. Patent Application No. 09/567,977, filed May 10, 2000, entitled "Optical Down-converter Using Universal Frequency Translation Technology," directed to related subject matter. Also cited in said Office Action were U.S. Patent No. 6,608,647, Dines, J.A.B., "Smart Pixel Optoelectronic Receiver Based on a Charge Sensitive Amplifier Design," *IEEE Journal of Selected Topics in Quantum Electronics*, IEEE, Vol. 2, No. 1, pp. 117-120 (April 1996), Simoni, A. *et al.*, "A Digital Camera for Machine Vision," *20th International Conference on Industrial Electronics, Control and Instrumentation*, IEEE, pp. 879-883 (September 1994), and Stewart, R.W. and Pfann, E., "Oversampling and sigma-delta strategies for data conversion," *Electronics & Communication Engineering*

Journal, IEEE, pp. 37-47 (February 1998), which have already been cited in the present application.

Documents AC61-AE61 were cited in an Office Action in related U.S. Patent Application No. 09/590,955, filed June 9, 2000, entitled "Phase Shifting Applications of Universal Frequency Translation," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 5,339,459, which has already been cited in the present application.

Documents AF61-AH61 were cited in an Office Action in related U.S. Patent Application No. 09/550,642, filed April 14, 2000, entitled "Method and System for Down-Converting an Electromagnetic Signal, and Transforms for Same," directed to related subject matter.

Documents AI61 and AA62 were cited in an Office Action in related U.S. Patent Application No. 10/317,165, filed December 12, 2002, entitled "Method and Apparatus for Reducing DC Offsets in Communication Systems Using Universal Frequency Translation Technology," directed to related subject matter.

Document AB62 were cited in an Office Action in related U.S. Patent Application No. 09/669,634, filed September 26, 2000, entitled "High Frequency Translator and Method of High Frequency Translation," directed to related subject matter. Also cited in said Office Action were U.S. Patent Nos. 5,955,992, 5,999,561, 6,049,706, 6,421,534, 6,560,301, 6,686,879, and German Patent No. DE 196 48 915 A1, which have already been cited in the present application.

Document AC62 was cited in an Office Action in related U.S. Patent Application No. 09/476,093, filed January 3, 2000, entitled "Communication System Method With

Multi-Mode and Multi-Band Functionality and Embodiments Thereof, Such as the Family Radio Service," directed to related subject matter. Also cited in said Office Action were U.S. Patent Nos. 5,937,013 and 5,790,587, which have already been cited in the present application.

Documents AD62 and AE62 were cited in a Notice of Allowance in related U.S. Patent Application No. 09/525,615, filed March 14, 2000, entitled "Method, System, and Apparatus for Balanced Frequency Up-conversion of a Baseband Signal and 4-Phase Receiver and Transceiver Embodiments," directed to related subject matter. Also cited in said Notice of Allowance were U.S. Patent Nos. 6,091,940, 6,370,371, 6,694,128, and 6,704,549, which have already been cited in the present application.

Documents AF62-AH62 were cited in a Written Opinion in related PCT Application No. PCT/US03/16403, filed May 27, 2003, entitled "Method and Apparatus for DC Offset Removal in a Radio Frequency Communication Channel," directed to related subject matter. Also cited in said Written Opinion was U.S. Patent No. 5,483,600, which has already been cited in the present application.

Documents AF62-AI62 and AA63-AE63 were cited in an Office Action in related U.S. Patent Application No. 10/290,323, filed November 8, 2002, entitled "Method and Apparatus for DC Offset Removal in a Radio Frequency Communication Channel," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 5,483,600, which has already been cited in the present application.

Documents AF63-AH63 were cited in an Office Action in related U.S. Patent Application No. 09/632,857, filed August 4, 2000, entitled "Wireless Local Area Network (WLAN) Technology and Applications Including Techniques of Universal

Frequency Translation," directed to related subject matter. Also cited in said Office Action were U.S. Patent Nos. 5,937,013, 6,014,551, 6,073,001, 6,085,073, and 6,314,279, which have already been cited in the present application.

Documents AI63 and AA64-AC64 were cited in an Office Action in related U.S. Patent Application No. 09/986,764, filed November 9, 2001, entitled "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Documents AE64-AH64 were cited in a Notice of Allowance in related U.S. Patent Application No. 09/987,193, filed November 13, 2001, entitled "Method and Apparatus for a Parallel Correlator and Applications Thereof," directed to related subject matter.

Document AI64 was cited in an Office Action in related U.S. Patent Application No. 09/632,857, filed August 4, 2000, entitled "Wireless Local Area Network (WLAN) Technology and Applications Including Techniques of Universal Frequency Translation," directed to related subject matter.

Documents AA65, AB65, and AH65 are co-owned patents which are directed to related subject matter.

Documents AC65 and AD65 were cited in an Office Action in related U.S. Patent Application No. 10/289,377, filed November 7, 2002, entitled "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Document AE65 was cited in a Notice of Allowance in related U.S. Patent Application No. 10/197,441, filed July 18, 2002, entitled "Method and System for Frequency Up-Conversion With a Variety of Transmitter Configurations," directed to related subject matter.

Document AF65 was cited in an Office Action in related U.S. Patent Application No. 10/086,250, filed March 4, 2002, entitled "Applications of Universal Frequency Translation," directed to related subject matter.

Document AG65 were cited in an Office Action in related U.S. Patent Application No. 09/590,955, filed June 9, 2000, entitled "Phase Shifting Applications of Universal Frequency Translation," directed to related subject matter. Also cited in said Office Action was U.S. Patent No. 5,982,315, which has already been cited in the present application.

Document AI65 was cited in an Office Action in related U.S. Patent Application No. 09/569,045, filed May 10, 2000, entitled "Method and Apparatuses Relating to a Universal Platform Module and Enabled by Universal Frequency Translation Technology," directed to related subject matter.

Documents AA66-AD66 were cited in a Notice of Allowance in related U.S. Patent Application No. 09/770,675, filed January 29, 2001, entitled "Wireless and Wired Cable Modem Applications of Universal Frequency Translation Technology," directed to related subject matter.

It is noted that some of these documents could be classified in more than one of the above categories.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☒ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing of a first Office Action on the merits. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
 - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
 - ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).


- ☐ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of _____ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- ☐ 6. A concise explanation of the relevance of the non-English language documents appears below:
- ☒ 7. A copy of document AP59 is enclosed. However, in accordance with 37 C.F.R. § 1.98(a)(2), copies of the U.S. patents and patent application publications cited on the attached Form PTO-1449 are not enclosed.

- ☐ 8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. _____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).
- ☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application nos. 09/293,342 and 09/176,022, in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed Form PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Patrick E. Garrett
Attorney for Applicants
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Date: 3/9/05

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Page 1 of 6

FORM PTO-1449

SEVENTH SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENTATTY. DOCKET NO.
1744.0010009APPLICATION NO.
09/550,644INVENTORS
SORRELLS *et al.*FILING DATE
April 14, 2000ART UNIT
2687

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
	AB						
	AC61	5,282,222	01/1994	Fattouche <i>et al.</i>			
	AD61	5,949,827	09/1999	DeLuca <i>et al.</i>			
	AE61	6,014,176	01/2000	Nayebi <i>et al.</i>			
	AF61	5,678,226	10/1997	Li <i>et al.</i>			
	AG61	5,760,632	06/1998	Kawakami <i>et al.</i>			
	AH61	6,160,280	12/2000	Bonn <i>et al.</i>			
	AI61	5,481,570	01/1996	Winters			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AJ						Yes No
	AK						Yes No
	AL						Yes No
	AM						Yes No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	AN		
	AO		
	AP	<u>59</u>	Deboo, Gordon J., <i>Integrated Circuits and Semiconductor Devices</i> , 2 nd Edition, McGraw-Hill, Inc., pp. 41-45 (1977).
	AQ		
	AR		

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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U.S. PATENT DOCUMENTS

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	AA62	5,745,846	04/1998	Myer <i>et al.</i>			
	AB62	5,345,239	09/1994	Madni <i>et al.</i>			
	AC62	4,132,952	01/1979	Hongu <i>et al.</i>			
	AD62	5,260,973	11/1993	Watanabe			
	AE62	6,307,894 B2	10/2001	Eidson <i>et al.</i>			
	AF62	6,091,289	07/2000	Song <i>et al.</i>			
	AG62	6,437,639 B1	08/2002	Nguyen <i>et al.</i>			
	AH62	2002/0037706 A1	03/2002	Ichihara			
	AI62	4,441,080	04/1984	Saari			

FOREIGN PATENT DOCUMENTS

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	AJ						Yes No
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	AM						Yes No

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U.S. PATENT DOCUMENTS

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	AA63	4,873,492	10/1989	Myer			
	AB63	5,697,074	12/1997	Makikallio <i>et al.</i>			
	AC63	5,784,689	07/1998	Kobayashi			
	AD63	6,335,656 B1	01/2002	Goldfarb <i>et al.</i>			
	AE63	6,690,232 B2	02/2004	Ueno <i>et al.</i>			
	AF63	5,636,140	06/1997	Lee <i>et al.</i>			
	AG63	6,366,622 B1	04/2002	Brown <i>et al.</i>			
	AH63	6,600,795 B1	07/2003	Ohta <i>et al.</i>			
	AI63	4,250,458	02/1981	Richmond <i>et al.</i>			

FOREIGN PATENT DOCUMENTS

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	AJ						Yes No
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	AM						Yes No

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	AA64	5,760,629	06/1998	Urabe <i>et al.</i>			
	AB64	6,084,465	07/2000	Dasgupta			
	AC64	6,204,789 B1	03/2001	Nagata			
	AD64	6,064,054	05/2000	Waczynski <i>et al.</i>			
	AE64	5,218,562	06/1993	Basehore <i>et al.</i>			
	AF64	5,239,496	08/1993	Vancraeynest			
	AG64	5,896,304	04/1999	Tiemann <i>et al.</i>			
	AH64	6,005,903	12/1999	Mendelovicz			
	AI64	5,834,979	11/1998	Yatsuka			

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	AM						Yes No

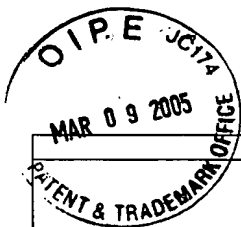
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	AA65	6,798,351 B1	09/2004	Sorrells <i>et al.</i>			
	AB65	6,813,485 B2	11/2004	Sorrells <i>et al.</i>			
	AC65	5,410,270	04/1995	Rybicki <i>et al.</i>			
	AD65	6,509,777 B2	01/2003	Razavi <i>et al.</i>			
	AE65	5,982,329	11/1999	Pittman <i>et al.</i>			
	AF65	6,208,636 B1	03/2001	Tawil <i>et al.</i>			
	AG65	3,614,630	10/1971	Rorden			
	AH65	6,836,650 B2	12/2004	Sorrells <i>et al.</i>			
	AI65	5,844,868	12/1998	Takahashi <i>et al.</i>			

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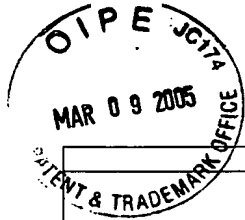
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	AA66	6,385,439 B1	05/2002	Hellberg			
	AB66	6,741,139 B2	05/2004	Pleasant <i>et al.</i>			
	AC66	6,823,178 B2	11/2004	Pleasant <i>et al.</i>			
	AD66	6,850,742 B2	02/2005	Fayyaz			
	AE						
	AF						
	AG						
	AH						
	AI						

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